AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method for automatically generating a framed digital image, comprising:

analyzing a portion of a first data set representing ~~rows and columns of~~ pixels of an unframed digital image so as to identify a plurality of image components each corresponding to a spatial region of the pixels;

independently analyzing each of the image components to determine a set of component characteristics for the corresponding image component;

collectively analyzing the plurality of sets of component characteristics to determine overall image characteristics indicative of subject matter of the unframed image;

analyzing the overall image characteristics to determine an image category corresponding to the subject matter~~at least one image characteristic for the digital image~~;

determining at least one frame attribute ~~based on~~ by applying framing rules for the image category to the ~~at least one~~ overall image characteristics; and

generating a second data set representing ~~rows and columns of~~ pixels of the framed digital image, the second data set ~~pixels~~ defining a representation of the unframed digital image surrounded by a frame having the at least one frame attribute.

2. (Currently amended) The method of claim 1, wherein the analyzing the portion of the first data set includes:

mapping the pixels ~~of the first data set~~ to a two-dimensional image space representative of the rows and columns of the unframed image; and

selecting a~~t least one~~ region of the two-dimensional image space for each of the image component~~sanalysis~~.

3-4. (Canceled)

5. (Currently amended) The method of claim 1, wherein the analyzing the portion of the first data set includes:

mapping the pixels ~~of the first data set~~ to a three-dimensional color space; and

selecting at ~~least one~~ region of the three-dimensional color space for each of the image components~~analysis~~.

6. (Original) The method of claim 5, wherein the selecting is performed in accordance with a principal component analysis technique.

7. (Currently amended) The method of claim [[5]]1, wherein~~, for each region,~~ the independently analyzing further includes:

identifying at least one of a dominant color of the image component, a dominant lightness of the image component, a pixel concentration of the image component, a color space component volume of the image component, and a color space component density of the image component.

8. (Currently amended) The method of claim 1, wherein the overall~~at least one~~ image characteristics include at least one ~~is selected from the group consisting~~ of color temperature indicative of the warmth or coolness of the image components, contrast ratio indicative of the range of lightness values of the image components, colorfulness indicative of the amount of hue exhibited by the image components, and color strength indicative of both colorfulness and lightness of the image components.

9-11. (Canceled)

12. (Currently amended) The method of claim 1[[0]], wherein the image category is selected from the group consisting of portrait, landscape, floral, city, industrial, and night.

13. (Currently amended) The method of claim [[9]]1, wherein ~~one of~~ the ~~framing scheme parameters is color scheme, and wherein the at least one~~ framing rules specif[[ies]]y a color scheme selected from the group consisting of same, similar, progressive, complementary, contrasting, achromatic, vivid, dark, and light.

14. (Currently amended) The method of claim [[9]]1, including:

modifying the ~~predetermined relationship~~ framing rules prior to the de[[fi]]termining.

15. (Original) The method of claim 1, including:

sending the second data set to an imaging device for producing the framed digital image.

16. (Original) The method of claim 1, wherein the representation of the unframed digital image is scaled in the framed digital image.

17. (Original) The method of claim 1, wherein the at least one frame attribute is selected from the group consisting of a border color, a border width, a border texture pattern, at least one shading color, and a number of borders per frame.

18. (Canceled)

19. (Currently amended) An[[The]] image processing apparatus ~~of claim 18, the image analyzer further~~ comprising

a component identifier adapted to receive a[[the]] first data set of pixels representing an unframed digital image and identify a plurality of ~~at least one~~ individual image components therefrom;

a component characterizer communicatively coupled to the component identifier for determining a set of ~~at least one~~ component characteristics for each ~~certain ones~~ of the

individual image components;

an image characterizer communicatively coupled to the component characterizer for determining ~~at least one~~ overall image characteristics from the collective plurality of sets of ~~at least one~~ component characteristics, the overall image characteristics indicative of subject matter of the unframed image; ~~and~~

an image categorizer communicatively coupled to the image characterizer for determining from the overall image characteristics an image category corresponding to the subject matter;

framing rules usable by the image categorizer to automatically define[[ing]] ~~the~~ at least one frame attribute based on ~~from~~ the image category and the overall ~~at least one~~ image characteristics; and

a framed image generator for processing the first data set and the at least one image attribute so as to automatically generate a second data set having rows and columns of pixels representing a framed digital image including a representation of the unframed digital image surrounded by a visually attractive frame having the at least one frame attribute.

20. (Original) The image processing apparatus of claim 19, further comprising:

a memory accessible by the image categorizer, the image categorizer automatically defining the at least one frame attribute in accordance with at least one framing scheme parameter stored in the memory.

21. (Original) The image processing apparatus of claim 20, wherein the memory is writeable, further comprising:

a user interface communicatively coupled to the memory for modifying the at least one framing scheme parameter.

22. (Currently amended) A program storage medium readable by a computing apparatus and embodying a program of instructions executable by the computing apparatus for automatically generating a visually pleasing framed digital image from an unframed

digital image, the program storage medium comprising:

a first logical segment of the instructions configured to analyze a portion of a first data set representing ~~rows and columns of~~ pixels of the unframed digital image so as to identify a plurality of image components each corresponding to a region of the pixels~~at least one image characteristic for the digital image~~;

a second logical segment of the instructions configured to independently analyze each of the image components to determine a set of component characteristics for the corresponding image component;

a third logical segment of the instructions configured to collectively analyze the plurality of sets of component characteristics to determine overall image characteristics indicative of subject matter of the unframed image;

a fourth logical segment of the instructions configured to analyze the overall image characteristics to determine an image category corresponding to the subject matter;

a fifth~~second~~ logical segment of the instructions configured to determine at least one frame attribute ~~based on~~ by applying framing rules for the image category to the ~~at least one~~ overall image characteristics; and

a sixth~~third~~ logical segment of the instructions configured to generate a second data set representing ~~rows and columns of~~ pixels of the framed digital image, the pixels defining a representation of the unframed digital image surrounded by a frame having the at least one frame attribute.

23. (New) The method of claim 1, wherein the framing rules specify an intensity selected from the group consisting of normal, strong, and muted.

24. (New) The method of claim 1, wherein the framing rules specify a texture selected from the group consisting of flat and patterned.

25. (New) The method of claim 1, wherein the framing rules specify a dimensionality selected from the group consisting of 2D and 3D.

26. (New) The method of claim 1, wherein, if the image category cannot be determined, determining the at least one frame attribute by applying default framing rules to the overall image characteristics.

27. (New) The method of claim 2, wherein the region is less than the entire two-dimensional image space.

28. (New) The method of claim 1, wherein the spatial regions of at least some of the image components have different dimensions.

29. (New) The method of claim 1, wherein the framing rules specify a color scheme that is different from, but visually attractive with regard to, a dominant color of the unframed image.